PLAGUE

Until recently it has been believed that rodent plague is unique in California, but it is now known definitely that plague is a problem of importance in all of the western states, infected rodents having been found recently in almost every state of the Pacific slope. There is every reason to believe that at one time an epidemic of rodent plague swept through western United States, leaving foci of infection in many states.

In the extensive research work that is now being done among rodents in California we have found that in many areas, fleas combed from rodents, including ground squirrels, chipmunks, wood rats and field mice, show plague infection. Infected fleas are found on infected rodents and they are also found on many rodents that show no sign of disease. The exact significance of this is unknown at the present time. For this reason, the presence of infection in rodents will continue to be regarded as a true index of a plague-infected area. It is hoped that the extensive research work that is being done by various health agencies will clear up many unexplained points in the transmission of the disease.

It is imperative, at all events, that every effort be made to extend our knowledge into the epidemiology of this disease, which, in world history, has played such a murderous rôle in the destruction of mankind.

SOCIAL SECURITY

With the provision of federal assistance under Social Security, the difficulties associated with the provision of adequate health services in the rural counties, without organized units, have been eased considerably. Spectacular results have not been obtained because the newly established services have been in operation for a very short time. There is evidence, however, that residents of many extreme rural areas are now provided with modern public health services that have been denied to them heretofore. Without doubt a demand for continuous public health services will follow and the present demonstrations lead to permanently established machinery for the maintenance of high health standards in the rural districts.

INFANT MORTALITY

Last year the State's infant death rate increased, particularly among the white population of the State (including Mexican) and there was an increase in the number of maternal deaths. The infant mortality rate, for many years, has been regarded as a sensitive index to general health conditions. Because it is based upon the proportion of infant deaths to the number of live births registered, rather than population (which is just now an unknown quantity) it has been assumed that the rate possesses a definite and reliable index to the work of the local health department. It would seem, now, however, that it has been demonstrated successfully that biological and other factors uncontrollable by humans are often decisive in determining the infant mortality rate in those districts where full and adequate service is given to prospective mothers and their infants. Detailed studies of infant mortality and maternal mortality, with particular reference to race, economic status of the family, education, constitutional disease in the parents and similar attributes would, without doubt, explain the reason for a large number of unpreventable infant deaths. At all events, it would seem fallacious to judge of any health unit upon the fluctuations in its infant mortality rate from year to year. It would be far better to base evaluations upon average rates, decade by decade, or at least by five-year periods. There is an opportunity for health officers to make careful studies of their infant death rates, in order that the causative factors may be accurately recorded. Until such time, it would seem that an entirely unfounded and mistaken evaluation might be made of the public health services involved.

CRIPPLED CHILDREN

Since the act for the relief of physically handicapped children went into effect, more than one thousand such individuals have found relief under its beneficent provisions. Under Social Security during the past year, it has been possible to conduct more clinics for the discovery of crippled children. As a result, treatment has been provided for large numbers of the physically handicapped, who might otherwise have gone through life a burden to themselves, their families, and to society. The results obtained through work among crippled children are so spectacular and so successful that they make a strong appeal not only to those who are engaged in public health activities, but to the general public as well.

PUBLIC HEALTH NURSING

During the past year large numbers of public health nurses have been placed in rural counties, where public health nursing service has never been applied heretofore. Public health nursing is an integral part of any adequate program in public health administration, and the enlarged opportunities for providing this service prove of great advantage not only to public health nurses, but also to the communities where this new service has been made available. It is hoped that there may be continued opportunities for extending public health nursing throughout all parts of California.

THE HEALTH OFFICERS' OPPORTUNITY

These are but some of the highlights in the public health of California that have appeared since the last meeting of this section. There are many other important topics for which there is not sufficient time to consider here.

No discussion of public health in this State during the past year, however, can be complete without mention of the many social, economic and political waves of unrest that are apparently affecting the daily lives of our people. The general consternation over labor disturbances, living conditions and economic upheavals of many sorts, is shared by the health officer as well as other servants of governmental units. In such a time of unrest, the provision of adequate public health service is essential. Programs must be devised and administered to fit conditions that may prevail in each particular local community. The local health officer has greater responsibilities than ever before. To know definitely the needs of the community and to provide effective public health service to fit such needs, requires keen discernment and administrative attributes of a high order.

The health officers of California have not failed in providing important service in the advancement of public welfare, and in spite of the important changes that occur almost daily in our social, economic, and political life, there is every reason to believe that the public health profession of this State will carry on in accordance with the tradition and prestige of preventive medicine.

IMPEDIMENTS TO MATERNAL HEALTH*

It is frequently asserted that two-thirds of maternal deaths are due to causes which are preventable. The assertion is undoubtedly real and is an indictment against the medical profession and the laity alike. But prevention by what means? Statistics inform us that one-third of all puerperal deaths are due to septicemia, approximately another third are attributable to albuminuria of pregnancy—toxic conditions—while all other causes contribute to the remaining third. These figures refer to the recorded cause of death, but do not indicate some fundamental factors responsible for maternal deaths.

ECONOMIC AND SOCIAL STATUS

The first of these underlying factors concerns the economic and social status of the patient. It is well known that the largest families are found among the "lowest" social and economic groups. It is significant that in a recent study it was found that not only was the birth rate highest among those in the lowest income brackets or on relief, but that among those families in which the social and economic status had progressively dropped between 1929–1932, the birth rate rose in almost direct ratio. The inherent social implications in these facts are many, but suffice it to say that where the environmental, nutritional, and medical needs are greatest, they are economically least obtainable.

The same one-third of our people who, in the words of President Roosevelt, are "poorly housed, poorly clothed, poorly fed," also get poor obstetrical care. Untrained, unsupervised midwives deliver several hundred thousand babies each year, and for at least 40,000 births there is no attendant. For the unemployed, for those living on a sub-

* By Thomas Parran, M. D., Surgeon-General, United States Public Health Service.

sistence level, for the poor farm families, I see no way of providing good obstetrical care except as a community responsibility. But you ask: "Can we afford it?" We cannot afford the price of continued neglect.

The maternal risks in relation to age of the mother increase beyond twenty-five years, reaching a maximum at forty years or over. The life hazard for the mother is greatest at the birth of the first child. In 1927, the first-born constituted 27 per cent of all births; in 1931, 31.9 per cent. In that same period there was an increase of 11 per cent in the number of mothers at age twenty-five giving birth to the first child, and a like increase among those of forty years. It is not unreasonable to assume that late marriages and one-child families, related as they are to economic and social problems, undoubtedly contribute to the maintenance of a high maternal death rate.

IGNORANCE AND INDIFFERENCE

A second factor underlying the material mortality rate is the ignorance or indifference of the patient. In the cities of New York and Philadelphia, it was found that approximately one-third of all maternal deaths were attributable to ignorance or lack of coöperation on the part of the patient. A recent report made by the Children's Bureau shows that 51 per cent of the women dying from puerperal causes had had no prenatal supervision and 10 per cent had not seen a physician or the doctor was called for the first time when the patient was moribund. Only 12 per cent had prenatal supervision which might be considered adequate. One cannot be complacent in the face of such facts. The opportunity for parents to know the essential needs of maternal care and the development of facilities to make available the necessary services are challenges confronting the public health authorities, physicians, and laity alike.

ABORTION

The third factor is the interrupted pregnancies through intentional abortion. Too infrequently is this large cause of death given consideration. . . . *Studies indicate that the abortion index between 1918 and 1932 increased more rapidly than the birth index.* Of approximately three thousand pregnancies in New York City, 30 per cent terminated in abortions; three-fourths being illegally induced abortions. The amazing fact is that approximately one-fourth of all maternal deaths follow interrupted pregnancies. Nearly three-fourths of the deaths associated with abortions were due to sepsis, and deaths due to septic abortions constituted half of all the deaths from puerperal septicemia, which is the greatest single cause of maternal mortality.

These figures are appalling, but they represent only the known cases and constitute only a small fraction of the total number. We were aware of the real facts, the magnitude of the problem would be more overwhelming. It is not one that is limited to the unmarried mother, although the death rate is higher in this group, but extends into the core of our social structure—the family. A survey of ten thousand clinic patients in New York City showed that 15 per cent of pregnancies were terminated by criminal abortions during the first five years of marriage. After ten years of married life, the rate rose to 40 per cent.

SYPHILIS

A fourth impediment to maternal health is syphilis. Yet it is the most easily correctible of all factors I have discussed. While syphilis is not a direct cause of maternal deaths, it is the greatest single cause of stillbirths. An average of one baby in every sixty born in this country carries the germ of syphilis in its body, yet no woman need bear a syphilitic child. Connecticut has paved the way by a state law which requires a physician's certificate and a laboratory test showing freedom from syphilis before a marriage certificate is issued.

I have discussed four great impediments to maternal health: poverty, ignorance, unwillingness to bear children, and disease. Until we shall have lifted the load of poverty, the community can at least share its burden to the extent of giving the minimum essentials of care during pregnancy and at childbirth to those women unable to secure such care for themselves. Good care will prove in itself a potent force in combating ignorance. It is scientifically possible to keep the germ of syphilis out of the bodies of our babies, but unless science is given a chance to operate, it is useless. Guiding the expectant mother into channels of thought which will result in a consultation with her physician on this specific consideration, is a problem which health organizations can materially aid in solving.

I scarcely know which is the greater tragedy—the unwanted child or the syphilitic child. Surely, from the standpoint of the community the syphilitic child presents the more complex problem. It is only the women themselves, and not their doctors, who can do something about the unwanted child and the deaths from abortion, sepsis, and death which results from preventing its arrival. But the community must assume a great part of the responsibility for the prevention of syphilitic children by careful, conscientious insinuation of better medical care. If expectant parents can be taught to give science a chance on this often neglected ground, science can reasonably be expected to carry out its full obligation to the community.

INFANT AND MATERNAL MORTALITY IN CALIFORNIA*

Infant mortality provides a sensitive index to public health conditions. The steady downward trend in the infant mortality rate for California from 1906 to 1935 indicates, clearly, the improvement in general health conditions. The rate in 1906 was 160.0 and in 1936 it was 53.0. If deaths of infants belonging to the foreign-born were excluded from this tabulation, the rate for the white population would equal, if not better, the outstanding rates of New Zealand—32.0 in 1933 and 1934.

Infant Mortality—California

Year	Rate	Year	Rate
1906	160.0	1921	66.3
1907	139.0	1922	71.1
1908	128.0	1923	72.9
1909	113.0	1924	67.1
1910	116.0	1925	68.5
1911	101.0	1926	62.9
1912	100.0	1927	62.5
1913	99.0	1928	62.4
1914	86.0	1929	63.0
1915	74.0	1930	58.6
1916	73.0	1931	56.5
1917	78.0	1932	52.8
1918	83.0	1933	53.4
1919	70.0	1934	51.6
1920	75.0	1935	49.5
		1936	53.0

While funds have never permitted such work to be conducted to a degree of completion, there is significance in the fact that the Bureau of Child Hygiene has, since 1923, made examinations of more than 250,000 children, most of them in the rural districts of the State. To be sure, there are sections where this type of service is lacking entirely and where no machinery is provided. In spite of this, the work is being extended and eventually there is every reason to believe that adequate public health protection may be provided for most of the rural districts of the State.

In 1936, four hundred and one mothers died in childbirth in California and in 1925, four hundred and ninety such deaths occurred. There has been a general reduction in the maternal mortality rates within the State. Were it not for abortions and conditions that are not amenable to change in California, the maternal mortality rate might well be reduced by one-half.

* See also page 301, in this issue.

Maternal Mortality—California, 1925-1935

Year	Rate	No. of Deaths
1925	5.7	490
1926	5.2	428
1927	5.3	447
1928	5.5	463
1929	5.2	426
1930	5.2	443
1931	6.2	510
1932	5.7	448
1933	4.8	364
1934	4.4	346
1935	4.7	375
1936	4.7	401